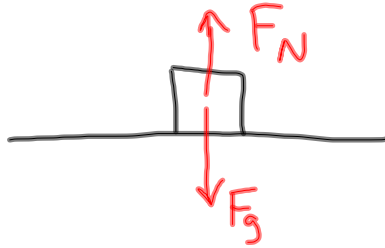


Quiz Wednesday

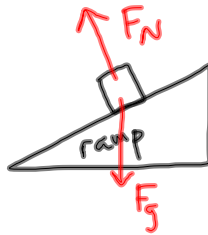
HW: p. 104: 56, 59,
64, 65

Due Monday

Normal Force:



- We must have a surface to have a normal force
- Force of the surface on the object
- Normal force is always perpendicular to the surface



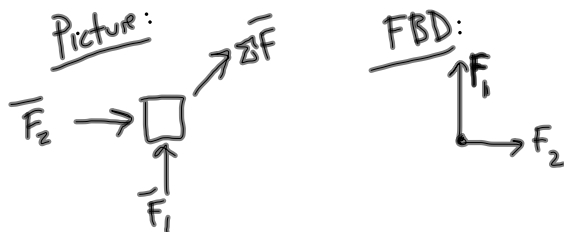
- If surface is horizontal, then

$$F_N = F_g.$$

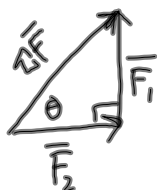
- If surface is not horizontal, then $F_N \neq F_g$. Only 1 component of F_N that is equal to F_g .

Force Notes and Practice Problem 3.2.12 CP Physics

One force with magnitude of 50 N acts on object in north direction. Another force of 30 N acts on object in east direction. If object has mass of 5 kg, what is the object's acceleration (magnitude, angle, and direction)?



- find net force ($\Sigma \vec{F}$)



magnitude of $\Sigma \vec{F}$: 58.3 N

angle: 59°

direction: N of E

- find acceleration \rightarrow Newton's 2nd Law

$$\Sigma \vec{F} = m \vec{a}$$

\vec{a} :
angle: 59°
direction: N of E

magnitude: $a = \frac{\Sigma F}{m}$

$$= \frac{58.3 \text{ N}}{5 \text{ kg}}$$

$$= 11.66 \text{ m/s}^2$$

SAME as $\Sigma \vec{F}$!